

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
12 September 2003 (12.09.2003)

PCT

(10) International Publication Number  
**WO 2003/075609 A3**

(51) International Patent Classification<sup>7</sup>: **H04S 03/00, 7/00**

(21) International Application Number:  
PCT/IB2003/000488

(22) International Filing Date: 7 February 2003 (07.02.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:  
02075907.2 7 March 2002 (07.03.2002) EP

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(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

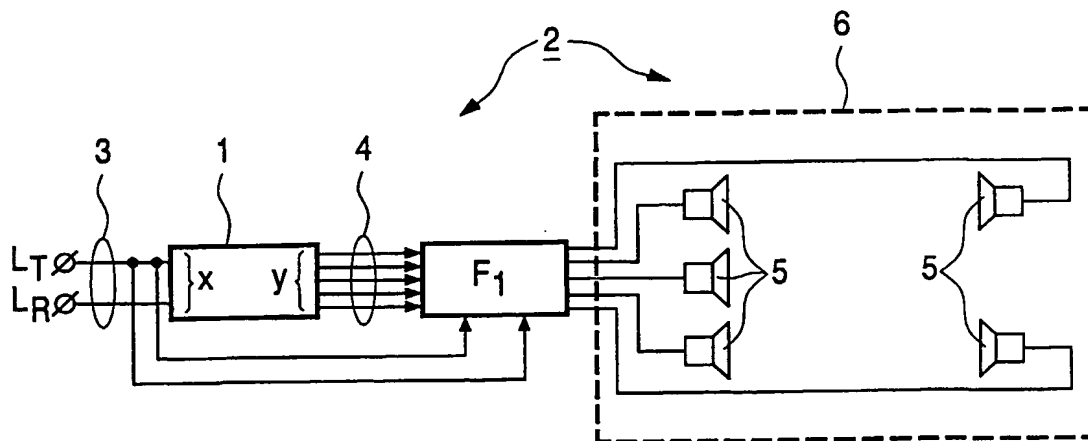
Published:

— with international search report  
— before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

(88) Date of publication of the international search report:  
8 January 2004

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: USER CONTROLLED MULTI-CHANNEL AUDIO CONVERSION SYSTEM



(57) Abstract: A multi-channel audio conversion system is described, comprising audio mode converting means having a signal input and a signal output for converting audio input signals to audio output signals representing audio in an audio output mode. The audio mode converting means are arranged for user controlled conversion from the audio input signals to the audio output signals. Advantageously the influencing of the conversion from audio input signals to audio output signals may take place by the listener. This results in a smooth and personalized freedom of choice regarding the amount of multi-channel stereo and/or surround effects in the audio output signals of the system.

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## INTERNATIONAL SEARCH REPORT

PCT/IB 03/00488

A. CLASSIFICATION OF SUBJECT MATTER  
IPC 7 H04S3/00 H04S7/00

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 H04S

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, INSPEC

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 0 466 435 A (SONY CORP) 15 January 1992 (1992-01-15) the whole document -----	1-4, 7-10

☐ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

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Date of the actual completion of the international search

6 November 2003

Date of mailing of the international search report

13/11/2003

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# INTERNATIONAL SEARCH REPORT

PCT/IB 03/00488

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP 0466435	A	15-01-1992	JP 4322600 A 12-11-1992
			JP 4068999 A 04-03-1992
			DE 69124854 D1 10-04-1997
			DE 69124854 T2 28-08-1997
			EP 0466435 A2 15-01-1992
			US 5257313 A 26-10-1993

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